or pathologist is dependent on chance material. Drastic direct methods of investigation can be applied in animal experiments to a much higher degree than is possible in clinical procedure; thus, animals in the initial stages of disease, e.g. embryos, can be killed and their pathological histology analysed.

On the other hand, better control of environment makes possible a rational study of many geriatric conditions, which in man are obscured by chance effects. The limitations of the usefulness of the methods lie, first, in the obvious fact that, as in all medical research on animals, the approach is indirect and, secondly, in the present impossibility of producing any particular hereditary model disease at will.

A detailed analysis of a lethal gene of the rat in the third chapter serves as a model for Dr. Grüneberg's approach. Tracing numerous clinical and pathological features back to a " primary " gene action responsible for an anomaly of cartilage, he draws a detailed pedigree of causes and with its aid discusses pleiotropism, tissue specificity, functional, developmental and time correlations, and other effects of gene manifestation.

The remainder of the book is a systematic description of our knowledge concerning more than a hundred hereditary diseases in laboratory rodents, arranged in twenty-one chapters according to the system of the body mainly affected.

Dr. Grüneberg's book puts mammalian genetics firmly on the map as a new ancillary science of medicine. For those interested in the wider aspects of human genetics, two points seem to the reviewer of paramount importance. They are, on the one hand, the great multiplicity of manifestations to which one gene gives rise and, on the other hand, the considerable number of mimic genes, resulting in similar conditions. It is very likely that heredity in man is equally complex but, for well-known reasons, it will be a long time before human genetics can approach the state of detailed knowledge of mammal genetics, which is here described for the first time. Meanwhile, this book may serve as a warning against the application of such " eugenic " measures as are based on the now antiquated notion that there is usually a simple relationship between a gene and a character.

H. KALMUS.

DEMOGRAPHY

Edge, P. Granville. *Vital Statistics and Public Health Work in the Tropics, Including Supplement on the Genealogy of Vital Statistics.* 2nd Edn. London, 1947. Baillière, Tindal & Cox. Pp. xii + 268. Price 15s.

MAJOR GRANVILLE EDGE, himself an expert on the vital statistics of tropical territories, has written this book in order to convince medical officers working in the tropics of the importance of vital statistics and to point out some of the pitfalls peculiar to work in the colonies. Readers of the EUGENICS REVIEW will not need to be convinced of the importance of the subject, and there are indeed signs that the authorities themselves are also aware of the necessity for this work. For some time Dr. Kuczynski has been occupying the post of Demographic Adviser to the Colonial Office, and both at the centre and in the field statistical work is being pursued. It is to be hoped that before long professional statisticians in the colonies will be able to relieve medical officers (who have done a good deal of the pioneering work) of the responsibility for vital statistics.

In view of this Major Edge's book may perhaps have been published a little late. Statisticians will realize the necessity of obtaining accurate and reliable figures for the population at risk before calculating birth, death, marriage or sickness rates. They will not, however, always be aware of the peculiarities of the native populations with whom they are dealing and they will find the description of their habits given by Major Edge most valuable. He stresses the necessity for a slow and cautious approach in requesting information; which the natives in many cases will be loath to give for superstitious reasons or because they mistrust the white man.

There is, however, one notable omission in the book. The difficulties mentioned by Major Edge make it fairly clear that a complete enumeration of an undeveloped Colonial territory is well nigh impossible, both because of the time such enumeration would take, and because of the shortage of trained staff to complete it. But where complete enumeration is impossible the sampling method may frequently be applied, and this method would appear to be of great value both in vital statistical and in public health work. In view of this it is a little odd to find that method treated so cursorily in the present work. Indeed the word "sampling" does not occur in the index, and it is only mentioned in the text as an aid to finding the number of inhabitants per hut in a given territory, whence the total population could be estimated by a count of huts. Even then Major Edge merely says (p. 52): "the investigator can select at random and visit a few dwellings of different types and by personal inquiry determine the number of persons in the several households visited, thereafter on the basis of data assembled the average household figure can be assessed." The omission of any more extended and serious discussion of sampling in Colonial territories, a subject on which Major Edge is peculiarly qualified to write, is a serious defect of this book.

It is odd to read on p. 96 that "the English registration system makes no mention of the age of mothers at the time of birth of successive children, nor for recording the order of such births." This information has, of course, been provided since July 1st, 1938, under the provisions of the Population (Statistics) Act. E. GREBENIK.

PSYCHOLOGY AND WAR

Glover, Edward. *War, Sadism and Pacifism.* London, 1947. Allen & Unwin. Pp. 292. Price 9s. 6d.

REFERRING to the atom bomb, Mr. Aneurin Bevan remarked that its effective control is predominantly a psychological matter. One might have expected that such insight on the part of a Cabinet Minister would be followed by a really worth-while attempt to apply the methods of psychological scientific research to the problem. But, instead, there has been as futile a series of conferences as the world has ever known. How explain the contradiction?

This book, now greatly enlarged since its first publication in 1933, provides an answer to this and many other vital problems of war and war prevention. Edward Glover is concerned to show the importance of unconscious mental attitudes in the causation of war and at the same time, alas! our inability to recognize these attitudes. In particular he shows how the way in which the individual deals with his unconscious primitive aggressive impulses can lead to a state of mind in which, as far as that individual is concerned, war and other violent measures become the inevitable consequence. And he goes further, demonstrating how certain group reactions displayed on occasion by a whole nation are derived from the widespread existence in the members of the group of unstable and unsatisfactory methods of dealing with primitive aggression.

This utter unawareness of the individual of the volcanic state of his own mind may also lead to militant pacifism—in itself derived from these aggressive impulses. Hence the fact that overzealous and incautious application of pacifist impulses can lead to war—not necessarily by accident, but by deliberate, though wholly unconscious, design. Ridiculous? Not in the least, as the reader will soon be forced to admit if he reads and re-reads this book.

How far the author's views will fall on deaf ears it is hard to predict. Unfortunately, the mental mechanisms involved being outside our awareness are not subject to the conscious exercise of reason and the influence of objective observation. A recent correspondence in the *New Statesman*, following some comments by Dr. Ernest Jones on the significance to the psycho-analyst of Russian anxiety about the alleged aggressive attitude to her of other countries, showed how intelligent and sincere people can utterly miss the point.